

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1. (Currently amended) A computer-implemented attributed debugging system comprising:
a debugger that facilitates debugging of a computer software application;
an expression evaluator associated with the debugger that determines details of an object of the computer software application that is a subject of the debugger, the expressions evaluator determines details of the object based upon a display proxy ~~associated with~~ implemented as a private nested class of the object, the display proxy provides relevant features of the object and conceals implementation specifics of the object; and
a variable display component that presents the determined details of the object to a developer.
2. (Previously Presented) The system of claim 1, the expression evaluator evaluates an expression associated with the object to determine the details, the expression is implemented in a particular programming language.
3. (Previously Presented) The system of claim 2, the programming language comprising at least one of C#, J# or Visual Basic.Net.
4. (Previously Presented) The system of claim 2, further comprising a plurality of expression evaluators, wherein each expression evaluator is associated with a different programming language.
5. (Previously Presented) The system of claim 1, the object comprises a class that includes at least one of a property or a method.

6. (Previously Presented) The system of claim 1, the expression evaluator creates an instance of the display proxy associated with the object of the computer software application.
7. (Cancelled)
8. (Currently amended) The system of claim [[7]] 1, the display proxy has access to private implementation details of the object.
9. (Previously Presented) The system of claim 1, further comprising an attribute cache directory that stores an attribute associated with the display proxy, the expression evaluator employs the stored attribute to determine the details of the object.
10. (Previously Presented) The system of claim 1, further comprising an editing component that facilitates modifying a value associated with the object.
11. (Previously Presented) The system of claim 1, the variable display employs at least one attribute associated with the object that provides a format to display the determined details of an object.
12. (Previously Presented) The system of claim 11, the attribute specifies the property is displayed.
13. (Previously Presented) The system of claim 12, the attribute employing an enumeration to specify the format of the display.
14. (Previously Presented) The system of claim 13, the enumeration includes one enumeration value that indicates the property should not be displayed to the developer.
15. (Previously Presented) The system of claim 13, the enumeration includes one enumeration value that indicates a hierarchical property is expanded by default.

16. (Previously Presented) The system of claim 13, the enumeration includes one enumeration value that indicates a hierarchical property is not expanded by default.
17. (Previously Presented) The system of claim 13, the enumeration includes one enumeration value that indicates a hierarchical property itself is not displayed and members of the hierarchical property are displayed.
18. (Previously Presented) The system of claim 11, the attribute specifies what is displayed for a class.
19. (Previously Presented) The system of claim 18, the attribute includes an argument that comprises a string that is displayed in a value column for an instance of the class.
20. (Previously Presented) The system of claim 18, the argument is associated with a property of the class.
21. (Currently amended) A method facilitating attributed debugging comprising:
receiving a request to examine details of one or more properties of an object in a computer software application being debugged;
determining whether a display proxy attribute exists for the object, the display proxy is implemented as a private nested class of the object and provides relevant properties regarding a state of the object and conceals properties related to implementation of the object;
creating a display proxy for the object in accordance with the display proxy attribute; and
examining the display proxy to determine debug information related to the object.
22. (Previously Presented) The method of claim 21 further comprising providing the debug information determined by the display proxy to a developer in response to the request to examine the object.
23. (Original) A computer readable medium having stored thereon computer executable instructions for carrying out the method of claim 21.

24-25. (Cancelled)

26. (Currently amended) An attributed debugging system comprising:

means for receiving a request to debug an object in a computer software application;

means for determining whether a display proxy attribute exists in association with the object, the display proxy is implemented as a private nested class of the object and provides relevant properties regarding a state of the object and conceals properties related to implementation of the object;

means for creating an instance of the display proxy;

means for examining the display proxy, means for examining the display proxy comprise means for obtaining values of the provided relevant properties; and

means for providing debug information in response to the request to debug the object, the debug information is based at least in part on the display proxy and includes at least the obtained values of the provided relevant properties.

27. (Previously Presented) A computer-implemented attributed debugging system, comprising:

a debugger that facilitates debugging a computer software application;

an expression evaluator associated with the debugger that examines at least one object of the computer software application, the expression evaluator determines debug information comprising states of the at least one object, the states include values for at least one property of the at least one object,

the expression evaluator inspects the at least one object to verify if each of the at least one object includes a display proxy that is a private nested class of the object, the display proxy provides relevant properties of an associated object and conceals properties related to implementation of the object, the expression evaluator examines the display proxy to determine debug information that includes values for the at relevant properties of the at least one object;

an attribute cache directory that retains instances of one or more display proxies, the expression evaluator queries the attribute cache directory for instances of display proxies associated with the at least one object, the expression evaluator creates an instance if not retained in the attribute cache directory; and

a variable display component that presents the debug information to a developer, the debug information includes values of relevant properties of the at least one object determined from examination of display proxies of the at least one object.